



Missouri Department of Health and Senior Services

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Director



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VIA EMAIL

To All Missouri Medical Physicians:

The Missouri Department of Health and Senior Services (DHSS) and the Board of Registration for the Healing Arts wish to emphasize the importance of the appropriate use of antiviral medications for the treatment and prophylaxis of influenza in order to prevent emergence of antiviral resistance, and to ensure that the existing limited supplies of antiviral drugs are being used in the most effective way possible.

2009 H1N1 influenza virus infections are spreading widely throughout the United States, including Missouri. Most infected persons have uncomplicated, typical influenza-like illness and do not require medical care. However serious illnesses and deaths have occurred, and certain groups of persons appear to be at increased risk of complications. Antiviral medications are available for influenza treatment and prophylaxis, but proper use of these drugs is important in order to ensure that adequate amounts will remain available for persons who will most benefit from their use, and so that the widespread occurrence of antiviral resistance can be avoided.

Shortages of oseltamivir (Tamiflu) oral suspension have recently been reported, and there are ongoing concerns that the widespread resistance to oseltamivir currently seen with seasonal H1N1 influenza viruses could also emerge in 2009 H1N1 influenza viruses. A relatively small number of oseltamivir-resistant 2009 H1N1 viruses have been identified, typically among persons who develop illness while receiving oseltamivir for chemoprophylaxis or immunocompromised patients with influenza who are being treated. These events particularly underscore the importance of the appropriate use of antiviral medications for treating individuals with known or suspected influenza, and the careful and limited use of these drugs for chemoprophylaxis.

The Centers for Disease Control and Prevention (CDC) has issued guidance for the use of antiviral medications for treatment and prophylaxis of influenza. Physicians are strongly encouraged to become familiar with these recommendations, and to incorporate them into their clinical decision-making. This guidance will likely be updated periodically, and the current version can be found at <http://www.cdc.gov/h1n1flu/recommendations.htm>. Also note that this guidance applies to the treatment and prophylaxis of both 2009 H1N1 and seasonal influenza virus infections. A summary of the guidance is attached.

Sincerely,

Margaret T. Donnelly
Director

www.dhss.mo.gov

Healthy Missourians for life.

The Missouri Department of Health and Senior Services will be the leader in promoting, protecting and partnering for health.

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Summary of Updated Interim Recommendations for the Use of Antiviral Medications in the Treatment and Prevention of Influenza

Centers for Disease Control and Prevention (CDC)
October 16, 2009

See <http://www.cdc.gov/h1n1flu/recommendations.htm> for the complete set of recommendations. In addition, supplemental recommendations for health care providers of children and adolescents have also been issued and are available at http://www.cdc.gov/h1n1flu/recommendations_pediatric_supplement.htm.

Treatment

- Influenza antiviral medications can reduce the severity and duration of influenza illness and can reduce the risk of influenza-related complications, including severe illness and death.
- Most healthy persons who develop an illness consistent with uncomplicated influenza, or persons who appear to be recovering from influenza, do not need antiviral medications for treatment or prophylaxis.
- However, persons presenting with suspected influenza and more severe symptoms such as evidence of lower respiratory tract infection or clinical deterioration should receive prompt empiric antiviral therapy, regardless of previous health or age.
- Treatment with oseltamivir or zanamivir is recommended for all persons with suspected or confirmed influenza requiring hospitalization.
- Early empiric treatment with oseltamivir or zanamivir should be considered for persons with suspected or confirmed influenza who are at higher risk for complications including:
 - Children younger than 2 years old;
 - Persons aged 65 years or older;
 - Pregnant women and women up to 2 weeks postpartum (including following pregnancy loss);
 - Persons of any age with certain chronic medical or immunosuppressive conditions
 - ✓ Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), or metabolic disorders (including diabetes mellitus);
 - ✓ Disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders)
 - ✓ Immunosuppression, including that caused by medications or by HIV; and
 - Persons younger than 19 years of age who are receiving long-term aspirin therapy.
- Children 2 years to 4 years old are more likely to require hospitalization or urgent medical evaluation for influenza compared with older children and adults, although the risk is much lower than for children younger than 2 years old. Children aged 2 years to 4 years without high risk conditions and with mild illness do not necessarily require antiviral treatment. [For more information on antiviral treatment of children and adolescents, see the supplementary guidance available at http://www.cdc.gov/h1n1flu/recommendations_pediatric_supplement.htm.]
- Treatment, when indicated, should be initiated as early as possible because the benefits are greatest when started within the first 2 days of illness. However, some studies of hospitalized patients with seasonal and 2009 H1N1 influenza have suggested benefit of antiviral treatment even when treatment was started more than 48 hours after illness onset.
- To reduce delays in treatment initiation, consider:
 - Informing persons at higher risk for influenza complications of signs and symptoms of influenza and need for early treatment after onset of symptoms of influenza (i.e., fever, respiratory symptoms);
 - Ensuring rapid access to telephone consultation and clinical evaluation for these patients as well as patients who report severe illness;
 - Considering empiric treatment of patients at higher risk for influenza complications based on telephone contact if hospitalization is not indicated and if this will substantially reduce delay before treatment is initiated.
- Treatment should not wait for laboratory confirmation of influenza because laboratory testing can delay treatment and because a negative rapid test for influenza does not rule out influenza. The sensitivity of rapid

tests in detecting 2009 H1N1 has ranged from 10% to 70%. Information on the use of rapid influenza diagnostic tests (RIDTs) can be found at http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm.

- Testing for 2009 H1N1 influenza infection with real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) should be prioritized for persons with suspected or confirmed influenza requiring hospitalization and based on guidelines from local and state health departments. [See page 3 of the Missouri Department of Health and Senior Services (DHSS) Health Update found at http://www.dhss.mo.gov/BT_Response/HAdS/HU10SwineFlu9-11-09.pdf.]

Chemoprophylaxis

- Consideration for antiviral chemoprophylaxis should generally be reserved for persons at higher risk for influenza-related complications who have had close contact with someone likely to have been infected with influenza.
- However, early treatment is an emphasized alternative to chemoprophylaxis after a suspected exposure. Household or close contacts (with risk factors for influenza complications) of confirmed or suspected cases can be counseled about the early signs and symptoms of influenza, and advised to immediately contact their healthcare provider for evaluation and possible early treatment if clinical signs or symptoms develop. Early recognition of illness and treatment when indicated is preferred to chemoprophylaxis for vaccinated persons after a suspected exposure.
- Antiviral agents should not be used for post exposure chemoprophylaxis in healthy children or adults based on potential exposures in the community, school, camp, or other settings.
- For antiviral chemoprophylaxis of 2009 H1N1 influenza virus infection, either oseltamivir or zanamivir is recommended. Duration of post-exposure chemoprophylaxis is 10 days after the last known exposure to 2009 H1N1 influenza.
- Oseltamivir was authorized for use for chemoprophylaxis under the EUA for children younger than 1 year of age, subject to the terms and conditions of the EUA.
- [For important additional information on antiviral chemoprophylaxis of children and adolescents, see the supplementary guidance available at http://www.cdc.gov/h1n1flu/recommendations_pediatric_supplement.htm. Included in this guidance is the statement that oseltamivir chemoprophylaxis for influenza virus infection in children younger than 1 year old is age-based; however, chemoprophylaxis for asymptomatic infants less than 3 months old is not recommended due to lack of safety data.]
- Chemoprophylaxis generally is not recommended if more than 48 hours have elapsed since the last contact with an infectious person.
- Chemoprophylaxis is not indicated when contact occurred before or after, but not during, the ill person's infectious period.
- For these recommendations, the infectious period for influenza is defined as one day before illness onset until 24 hours after fever ends [without the use of fever reducing medications].
- Close contact, for the purposes of this document, is defined as having cared for or lived with a person who is a confirmed, probable, or suspected case of influenza, or having been in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of such a person. Examples of close contact include sharing eating or drinking utensils, physical examination, or any other contact between persons likely to result in exposure to respiratory droplets. Close contact typically does not include activities such as walking by an infected person or sitting across from a symptomatic patient in a waiting room or office.

Additional Information

- Based on global experience to date, 2009 H1N1 influenza viruses likely will be the most common influenza viruses among those circulating in the coming season, particularly those causing influenza among younger age groups. Circulation of seasonal influenza viruses during the 2009-10 season is also expected. Influenza seasons are unpredictable, however, and the timing and intensity of seasonal influenza virus activity versus 2009 H1N1 circulation cannot be predicted in advance.
- Currently circulating 2009 H1N1 viruses are susceptible to oseltamivir and zanamivir, but resistant to amantadine and rimantadine; however, antiviral treatment regimens might change according to new antiviral resistance or viral surveillance information.

- Information on the dose and dosing schedule for oseltamivir and zanamivir is provided in the document (<http://www.cdc.gov/h1n1flu/recommendations.htm>). An April 2009 Emergency Use Authorization authorizes the emergency use of oseltamivir in children younger than 1 year old (<http://www.cdc.gov/h1n1flu/eua/>) subject to the terms and conditions of the EUA.

Note that this CDC guidance should be considered interim, and will be updated as needed. The current version will be available at <http://www.cdc.gov/h1n1flu/recommendations.htm>.

Links to comprehensive information and guidance for medical professionals on 2009 H1N1 influenza are available at http://www.dhss.mo.gov/BT_Response/MedProfs.html. Links to comprehensive information and guidance on seasonal influenza are found at <http://www.dhss.mo.gov/PandemicInfluenza/MedSeasonalFlu.html>.